



5. A method as recited in claim 1 wherein said semiconductor devices are mounted to said heat sink by use of heat conductive adhesive located between said chip and said heat sink and serving to conduct heat from said chip to said heat sink.

[c6]

6. A method as recited in claim 1 further comprising the step of placing a quantity of light reflective adhesive located between said semiconductor devices and said heat sink.

[c7]

7. A method as recited in claim 1 wherein at least one of said semiconductor devices chip includes

a substrate on which epitaxial layers are grown,

a buffer layer located on said substrate, said buffer layer serving to mitigate differences in material properties between said substrate and other epitaxial layers,

a first cladding layer serving to confine electron movement within the chip, said first cladding layer being adjacent said buffer layer,

an active layer, said active layer emitting light when electrons jump to a valance state,

a second cladding layer, said second cladding layer positioned so that said active layer lies between cladding layers, and

a contact layer on which an electron may be mounted for powering said chip.

[c8]

8. A method as recited in claim 1 further comprising installing a fan in said light source to facilitate air circulation and cooling.

[c9]

9. A method as recited in claim 1 further comprising forming an air chamber in said heat sink.

[c10]

10. A method as recited in claim 9 further comprising placing a quantity of TE cooler material on the interior of said air chamber.

[c11]

11. Method for making a semiconductor light source comprising the steps of:



[c17]

17. A method as recited in claim 11 wherein at least one of said semiconductor devices is selected from the group consisting of light emitting diodes, light emitting diode arrays, laser chips, and VCSEL chips.

[c18]

18. A method as recited in claim 11 wherein at least one of said heat sinks includes a material selected from the group consisting of include copper, aluminum, silicon carbide, boron nitride natural diamond, monocrystalline diamond, polycrystalline diamond, polycrystalline diamond compacts, diamond deposited through chemical vapor deposition and diamond deposited through physical vapor deposition.

[c19]

19. A method as recited in claim 11 further comprising the step of applying a quantity of light reflective adhesive located between at least one of said semiconductor devices and said primary heat sink.

[c20]

20. A method as recited in claim 11 wherein at least one of said semiconductor devices includes

a substrate on which epitaxial layers are grown,

a buffer layer located on said substrate, said buffer layer serving to mitigate differences in material properties between said substrate and other epitaxial layers,

a first cladding layer serving to confine electron movement within the chip, said first cladding layer being adjacent said buffer layer,

an active layer, said active layer emitting light when electrons jump to a valance state, and

a second cladding layer, said second cladding layer positioned so that said active layer lies between cladding layers.

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